

In the claims:

1-27. (Canceled)

28. **(Amended)** A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has comprising a conserved C-terminal seven-cysteine skeleton at least about 60% identical to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.

29. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.

30. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.

31. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.

32. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.

33. **(Previously Presented)** The method of claim 28, wherein said morphogen is a BMP-2 polypeptide.

34. **(Previously Presented)** The method of claim 28, wherein said morphogen is a BMP-5 polypeptide.

35. **(Previously Presented)** The method of claim 28, wherein said morphogen is a BMP-6 polypeptide.

36. **(Previously Presented)** The method of claim 28, wherein said morphogen is a 60A polypeptide.

37-45. (Canceled)

46. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.

47. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.

48. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises

residues 30-431 of SEQ ID NO: 2.

49-51. (Canceled)

52. **(Amended)** A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen ~~selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide,~~ wherein said morphogen has comprising a conserved C-terminal seven-cysteine skeleton at least about 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO: 2), ~~and~~ wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.
53. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.
54. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.
55. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.
56. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.
57. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.
58. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.
59. **(Previously Presented)** The method of claim 52, wherein said morphogen comprises residues 30-431 of SEQ ID NO: 2.
60. **(New)** The method of claim 52, wherein said morphogen is a BMP-2 polypeptide.
61. **(New)** The method of claim 52, wherein said morphogen is a BMP-5 polypeptide.
62. **(New)** The method of claim 52, wherein said morphogen is a BMP-6 polypeptide.
63. **(New)** The method of claim 52, wherein said morphogen is a 60A polypeptide.